臺灣綜合大學系統 105 學年度學士班轉學生聯合招生考試試題

科目名稱	計算機概論	類組代碼	A12
		科目碼	A1201

※本項考試依簡章規定各考科均「不可以」使用計算機	本試題共計 4 頁

一、選擇題 [皆為單選，50% in total，2% each，不答得 0 分，答錯倒扣 1 分，扣至總分零分為止]

※ 注意：請於答案卷作答，於本試題紙上作答者，不予計分。

1. A _____ is a multiuser operating system that organizes and coordinates how multiple users access and share resources on a network. (A) stand-alone operating system (B) virtual machine (C) server operating system (D) multipurpose operating system (E) mobile operating system

2. With _____, the operating system allocates a portion of a storage medium to function as additional RAM. (A) USB flash drive (B) spooling (C) cache (D) virtual memory (E) registers

3. Mobile operating systems usually reside in a _____ that store permanent instructions. (A) buffer (B) disk (C) USB drive (D) firmware (E) CD-ROM

4. A(n) _____ is an information system that captures and store human knowledge and *imitates* human reasoning and decision making. (A) decision support system (B) expert system (C) intelligent system (D) management information system (E) database system

5. A _____ defines how users view the organization of data in a database. (A) data model (B) data mart (C) data dictionary (D) report writer (E) record

6. In the analysis phase of software development cycle, _____ feasibility measures whether the organization has or can obtain the computing resources, software services, and qualified people needed to develop, deliver, and then support the proposed information system. (A) operation (B) schedule (C) technical (D) economic (E) legal

7. _____ is a language that describes the presentation (not the content) of a web page. (A) XML (B) CSS (C) HTML (D) Javascript (E) JSON

8. A(n) _____ is a program that translates and executes source programs. (A) parser (B) compiler (C) assembler (D) linker (E) interpreter

9. A _____ is a network that connects computers and devices in an individual's workspace using wired and wireless technology. (A) PAN (B) P2P (C) WAN (D) BAN (E) LAN

10. The practice used by some ISPs that restricts or slow down a customer's Internet access when he or she has used all the allotted data amount is known as _____. (A) capping (B) throttling (C) Bluebugging (D) DoS attack (E) IP hijacking

11. _____ is a scam in which a perpetrator sends an official looking email message that attempts to obtain your personal information. (A) Spam (B) Phishing (C) Malware (D) Spyware (E) Adware

12. When an operating system stores data on a disk, it places that data in the first available _____. (A) buffer (B) cell (C) block (D) array (E) sector

13. A _____ provides a read-only, static view of a source database that is typically used for safeguarding data against errors, offloading reporting, etc. (A) schema (B) map (C) snapshot (D) page (E) transaction

14. _____ is a program, typically malicious, designed to enable access to a computer or areas of its software that would not otherwise be allowed. (A) Virus (B) Spyware (C) Worm (D) Rootkit (E) Trojan horse

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15. An URL does NOT contain _____. (A) protocol (B) network id (C) resource name (D) domain name (E) server name

16. Two's complement is the way most modern computer represent integers. To get the two's complement of a number, simply invert every digits of the number and add 1. Based on this rule, what is the two's complement of 64? (A) 00100000 (B) 11011111 (C) 11100000 (D) 00011111 (E) 11110000

17. Which of the following statements about passing C++ arrays as arguments is FALSE? (A) It is impossible to pass an array by value. (B) When declaring an array in a function's parameter list, you do not attach an ampersand (&) to the name of the component type. (C) When declaring a one-dimensional array in a function's parameter list, you must include its size within square brackets. (D) At run time, the base address of the argument is passed to the function (E) It is possible to pass an array to a function as a pointer

18. Given the following C++ declarations:

    float a = 2.0, b = 3.0;
    const float* ptr1 = &a;
    float * const ptr2 = &b;

    which of the following is a valid assignment?
    (A) *ptr2 = *ptr1; (B) *ptr1 = *ptr2; (C) ptr1 = *ptr2; (D) ptr2 = ptr1 (E) a = ptr1

19. Public-key encryption is also known as _____. (A) open-key encryption (B) symmetric key encryption (C) two-key encryption (D) scrambled encryption (E) asymmetric key encryption

20. Which of the following protocol is used to translate an IP address to a MAC address? (A) DNS (B) ARP (C) DHCP (D) IP (E) PPP

21. A _____ is a small text file that a web server stores on your computer for personalization, or keeping track of items in a user's shopping cart, etc. (A) profile (B) cookie (C) certificate (D) spreadsheet

22. Which of the following about C++ is true? (A) The compiler will always define a default constructor for you (B) There can be multiple constructors in a class as long as they have different set of parameters (C) Constructors do not return any value, so their return types must be void (D) There can be multiple destructors in a class (E) Constructor and destructor must be called explicitly

23. Which of the following is NOT true about UDP? (A) Provides connectionless data delivery services to upper layer applications (B) Provides checksums for data integrity (C) Data is guaranteed to be delivered in order (D) Provides port numbers for addressing different functions at the source and the destination (E) Suitable for simple query-response protocols, such as DNS or NTP

24. Which one of the following is NOT a dynamic data structure? (A) Linked list (B) Dictionary (C) Array (D) Binary tree (E) Vector

25. C++ Classes cannot: (A) Be derived from other classes (B) Protect private data members from being accessed outside the class (C) Be used to model attributes and behaviors of objects (D) Include objects from other classes as members (E) Initialize data members in the class definition

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二、問答題

(一) 名詞解釋 [25% in total; 5% for each term]
Please briefly explain the following terms

1. Pretexing

2. Polymorphism

3. Internet of Things (IoT)

4. Virtualization

5. IaaS

(二) 程式設計與簡答題 (共三題) [25%]

1. Explain how the appropriate design of the electronic database (e.g., normalization) can help ensure the confidentiality of the critical data. (8%)

2. Use any programming language you want to write a program that takes 5 integers from a user, compares the value of these integers, and then display all these integers in an ascending order on the computer screen. [12%]

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3. What is the output of the following C++ program? [5%]

```cpp
#include <iostream>
int main ( ) {
        int y, x=1, total = 0;
        while (x<=10)
        {
            if (x % 5 = = 0)
            {
                x++;
            }
            else
            {
                y = x * x;
                cout << y << endl;
                total += y;
                ++x;
            }
        }
        cout << "Total is" << total << endl;
        return 0;
}
```

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